MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR MANAGEMENT

Briggs Industries, Inc.
315 S. Sycamore Road
Flora, Indiana 46929

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 015-11680-00033	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary decorative chromium electroplating plant for plumbing fixtures.

Authorized Individual:	Rhonda Lipinski
Source Address:	315 South Sycamore Road, Flora, Indiana 46929
Mailing Address:	315 South Sycamore Road, Flora, Indiana 46929
Phone Number:	(219) 967-4141
SIC Code:	3432
County Location:	Carroll
County Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Minor Source, under PSD or Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

(a) One (1) decorative chromium electroplating tank, identified as tank no. 1, with a maximum capacity of two thousand and nine hundred and fifty(2950) pounds of plumbing fixtures per hour, using a wetting agent and packed bed scrubber/composite mesh pad system as controls, and exhausting to one (1) stack, identified as P-2.

(b) One (1) sand blaster, identified as SB-1, with a maximum capacity of two thousand and nine hundred and fifty(2950) pounds of plumbing fixtures per hour, using hepa filter as a control, and exhausting inside the building.

(c) One (1) buffing/polishing machine, identified as BP-1, with a maximum capacity of two thousand and nine hundred and fifty(2950) pounds of plumbing fixtures per hour, using two(2) cyclones as controls, and exhausting to two (2) stacks, identified as C-1 and C-2.

(d) One (1) natural gas fired boiler, identified as B-27, with a maximum capacity of 2.6778 million British thermal units (MMBtu) per hour, and venting to the atmosphere.

(e) One (1) natural gas fired boiler, identified as B-28, with a maximum capacity of 0.360 million British thermal units (MMBtu) per hour, and venting to the atmosphere.

(f) Twenty-six (26) natural gas fired heaters, identified as SH 1-26, with a combined maximum capacity of 5.435 million British thermal units(MMBtu) per hour, and venting to the atmosphere.

(g) Two (2) natural gas fired air make-up units, identified as AMU 29 and 30, with a combined maximum capacity of 2.916 million British thermal units(MMBtu) per hour, and venting to the atmosphere.

(h) Three (3) soldering tables, identified as ST 1-3, with a maximum combined capacity of 0.600 million British thermal units (MMBtu) per hour, and exhausting inside the building.

(i) One (1) rack stripper, identified as RS-1, with a maximum capacity of two thousand and nine hundred and fifty(2950) pounds of plumbing fixtures per hour, and exhausting to one (1) stack, identified as P-1.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is not required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a minor source, as defined in 326 IAC 2-7-1(22);

(b) It is not an affected source under Title IV (Acid Deposition Control) of the Clean Air Act, as defined in 326 IAC 2-7-1(3);

(c) It is not a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONSTRUCTION CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to operate does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Modification to Permit [326 IAC 2]

All requirements and conditions of this operating permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of operating permits pursuant to 326 IAC 2 (Permit Review Rules).

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

(a) The total source potential to emit of any of the criteria pollutants is less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.

(b) Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAM prior to making the change.

(c) Any change or modification which may increase potential to emit to 10 tons per year of any single hazardous air pollutant, twenty-five tons per year of any combination of hazardous air pollutants, or 100 tons per year of any other regulated pollutant from this source, shall cause this source to be considered a major source under Part 70 Permit Program, 326 IAC 2-7, and shall require approval from IDEM, OAM prior to making the change.

C.2 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that lack of proper maintenance does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM. IDEM, OAM may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of [326 IAC 2-6.1-6] whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

(c) The Permittee shall notify the OAM within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.4 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;

(c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

(1) The Permittee may assert a claim that, in the opinion of the Permittee, information removed or about to be removed from the source by IDEM, OAM, or an authorized representative, contains information that is confidential under IC 5-14-3-4(a). The claim shall be made in writing before or at the time the information is removed from the source. In the event that a claim of confidentiality is so asserted, neither IDEM, OAM, nor an authorized representative, may disclose the information unless and until IDEM, OAM, makes a determination under 326 IAC 17-1-7 through 326 IAC 17-1-9 that the information is not entitled to confidential treatment and that determination becomes final. [IC 5-14-3-4; IC 13-14-11-3; 326 IAC 17-1-7 through 326 IAC 17-1-9]

(2) The Permittee**,** and IDEM, OAM, acknowledge that the federal law applies to claims of confidentiality made by the Permittee with regard to information removed or about to be removed from the source by U.S. EPA. [40 CFR Part 2,

Subpart B]

C.5 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

(a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM, Permits Branch, within thirty (30) days of the change.

(b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).

(c) IDEM, OAM, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.6 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM , the fact that continuance of this permit is not consistent with purposes of this article.

C.7 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.8 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

Testing Requirements

C.9 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing methods approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the Commissioner, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Compliance Monitoring Requirements

C.10 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment, no more than ninety (90) days after receipt of this permit. If due to circumstances beyond its control, this schedule cannot be met, the Permittee may extend the compliance schedule an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date. The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.11 Maintenance of Monitoring Equipment [IC 13-14-1-13]

(a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter

should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.

(b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.12 Actions Related to Noncompliance Demonstrated by a Stack Test

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected emissions unit while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected emissions unit.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Record Keeping and Reporting Requirements

C.13 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in

326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.14 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.15 General Record Keeping Requirements [326 IAC 2-6.1-2]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this permit;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that improper maintenance did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC2-1.1-1(1).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

(d) Unless otherwise specified in this permit, any quarterly report shall be submitted within

thirty (30) days of the end of the reporting period. The reports do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports. The Emergency/Deviation Occurrence Report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.

(g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

C.17 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) Annual notification shall be submitted to the Office of Air Management stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.

(c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Management
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

(d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

(a)	One (1) decorative chromium electroplating tank, identified as tank no. 1, with a maximum capacity of two thousand and nine hundred and fifty(2950) pounds of plumbing fixtures per hour, using a wetting agent and packed bed scrubber/composite mesh pad system as controls, and exhausting to one (1) stack, identified as P-2. Packed bed scrubber/composite mesh pad system does not need to be in operation for compliance.

Emission Limitations and Standards

D.1.1 General Provisions Relating to HAPs [326 IAC 20-1-1] [40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 63, Subpart N.

D.1.2 Chromium Electroplating NESHAP [326 IAC 20-8-1][40 CFR Part 63, Subpart N]

This facility is subject to 40 CFR Part 63, Subpart N, which is incorporated by reference as 326 IAC 20-8-1. A copy of this rule is attached.

(a) During tank operation, the Permittee shall control chromium emissions discharged to the atmosphere from tank no. 1 by not allowing the surface tension of the electroplating bath contained within the tank to exceed forty-five (45) dynes per centimeter (dynes/cm) (3.1×10^{-3} pound-force per foot [lbf/ft]) at any time during operation of the tanks.

Pursuant to 40 CFR 63.343(c)(5)(i), the Permittee has accepted 45 dynes/cm as the maximum surface tension value that corresponds to compliance with the applicable emission limitation, 0.01 mg/dscm (4.4×10^{-6} gr/dscf) in lieu of establishing the maximum surface tension during an initial performance test.

(b) The following work practice standards for the tank are also applicable:

(1) At all times, including periods of startup, shutdown and malfunction, the Permittee shall operate and maintain the tank, wetting agent, and monitoring equipment in a manner consistent with good air pollution control practices, consistent with the Operation and Maintenance Plan (OMP) required by Condition D.1.4.

(2) Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the OMP required by Condition D.1.4.

(3) Determination of whether acceptable operation and maintenance procedures are being used will be based on the information available to IDEM, OAM, which may include, but is not limited to, monitoring results; review of the OMP, procedures and records; and inspection of the source.

(4) Based on the results of the determination made under Condition D.1.2(b)(3) above, IDEM, OAM may require that the Permittee make changes to the OMP. Revisions may be required if IDEM, OAM finds that the plan:

(A) Does not address a malfunction that has occurred;
(B) Fails to provide for the operation of the tank, air pollution control

techniques (i.e., wetting agent), or process monitoring equipment during a malfunction in a manner consistent with good air pollution control practices; or

(C) Does not provide adequate procedures for correcting malfunctioning process equipment, air pollution control techniques, or monitoring equipment as quickly as practicable.

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP), in accordance with Section B.12 - Preventive Maintenance Plan, of this permit, is required for tank no. 1.

D.1.4 Operation and Maintenance Plan [40 CFR 63.342(f)(3)]

(a) An Operation and Maintenance Plan (OMP), in accordance with 40 CFR 63.342(f)(3), shall be prepared and implemented no later than the compliance date. The OMP shall specify the operation and maintenance criteria for tank no. 1, wetting agent and monitoring equipment, and shall include the following elements:

(1) Manufacturers recommendations for maintenance of the monitoring equipment used to measure surface tension;

(2) Documentation of the operation and maintenance criteria for the tank, wetting agent, and monitoring equipment;

(3) Procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur;

(4) A systematic procedure for identifying malfunctions of the tank, wetting agent , and monitoring equipment; and for implementing corrective actions to address such malfunctions;

(b) If the OMP fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the Permittee shall revise the OMP within forty five (45) days after such an event occurs.

(c) Recordkeeping associated with the OMP is identified in Condition D.1.7. Reporting associated with the OMP is identified in Condition D.1.8.

Compliance Determination Requirements

D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [40 CFR 63.344]

The Permittee is not required to test this facility by this permit. However, IDEM, OAM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required, compliance with the emission limit of 0.01 milligrams per dry standard cubic meter shall be determined by a performance test conducted in accordance with the provisions of 40 CFR 63.344.

D.1.6 Monitoring to Demonstrate Continuous Compliance [40 CFR 63.343 (c)(5) & (7)]

The Permittee shall monitor the surface tension of the electroplating bath in tank no. 1. Operation of the tank at a surface tension of greater than 45 dynes per centimeter shall constitute noncompliance with the standards. The surface tension of the tank when in operation shall be monitored according to the following schedule:

(a) The surface tension shall be measured once each day of operation for a total of forty hours of operation, provided that there are no more than four hours of operation between each measurement. The surface tension shall be measured with a stalagmometer or a tensiometer as specified in 40 CFR 63, Appendix A, Method 306B (Surface Tension Measurement and Record Keeping for Chromium Plating Tanks Used at Electroplating and Anodizing Facilities). If a tensiometer is used to measure surface tension, the instructions given in ASTM Method D1331-89, "Standard Test Methods for Surface and Interfacial Tension of Solutions of Surface Active Agents", must be followed.

(b) The time between monitoring can be increased if there have been no exceedances. Once there are no exceedances in forty (40) hours of operating time, the surface tension measurement may be conducted once every eight (8) hours of operating time. Once there are no exceedances during forty (40) hours of operating time, surface tension measurement may be conducted once every forty (40) hours of operating time on an ongoing basis or on an alternative monitoring schedule approved by IDEM, OAM until an exceedance occurs.

(c) Once an exceedance occurs through tank surface tension measurement, wetting agent shall be added and the original monitoring schedule of once each day of operation shall be resumed. A subsequent decrease in frequency of monitoring surface tension is allowed as stated in Condition D.1.6(a) above.

(d) Once a tank of bath solution is drained and a new solution is added, the original surface tension monitoring schedule of once each day of operation must be resumed with a subsequent decrease in monitoring frequency allowed as stated in Condition D.1.6(a).

(e) Operating time for chromium electroplating is that time when the rectifier is turned on and a part is in the tank. When there is no part in a tank for fifteen (15) or more minutes, that time will not be considered operating time; likewise, if the time between placing a part in the tank is less than fifteen (15) minutes, that time will be considered part of the operating time.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.7 Record Keeping Requirements [40 CFR 63.346]

(a) The Permittee shall maintain records to document compliance with Conditions D.1.2 and D.1.4. These records shall be maintained in accordance with the Section C condition entitled "General Record Keeping Requirements" of this permit, be kept for a period of five (5) years, and include a minimum of the following:

(1) Records of monitoring data required by 40 CFR 63.343(c) that are used to demonstrate compliance with the standard, i.e., surface tension of the bath in each tank, including the date and time the data are collected. If a tensiometer is used to measure surface tension, a copy of ASTM Method D 1331-89, "Standard Test Methods for Surface and Interfacial Tension of Solutions of Surface Active Agents," must be included with the log book containing surface tension measurements.

(2) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions, as indicated by monitoring data, that occurs.

(3) The total process operating time of the tank during the reporting period.

(4) Records of the date, time, and amount of fume suppressants added to the electroplating bath.

(5) All documentation supporting the notifications and reports required by 40 CFR 63.9 and 63.10 (Subpart A, General Provisions) and by Condition D.3.8.

(6) Inspection and maintenance records documenting source's incorporation of the manufacturer's recommendations for maintenance of the monitoring equipment used to measure surface tension.

(b) The Permittee shall keep the written OMP on record after it is developed to be made available, upon request, by IDEM, OAM for the life of the tank or until the tank is no longer subject to the provisions of 40 CFR 63.340. In addition, if the OMP is revised, the Permittee shall keep previous versions of the OMP on record to be made available for inspection, upon request by IDEM, OAM for a period of five (5) years after each revision to the plan.

D.1.8 Reporting Requirements [40 CFR 63.345 & 63.347]

(a) In accordance with 40 CFR 63.345, a notification must be submitted to IDEM, OAM prior to any change, modification, or reconstruction of the facility (including conducting electroplating operations that fall under the definition of hard chromium electroplating) or construction of a new facility or source. Notification shall be submitted as soon as practicable before the date construction or reconstruction commences.

(b) In accordance with 40 CFR 63.347(c)(2), a notification of the date when construction or reconstruction was commenced shall be submitted to IDEM, OAM no later than thirty (30) calendar days after such date. In addition, a notification of the actual date of startup of the new or reconstructed facility or source shall be submitted to IDEM, OAM within thirty (30) calendar days after such date. Additional notifications required under 40 CFR 63.345 and 63.347 shall be specified as they become due.

(c) The Permittee shall notify IDEM, OAM in writing of their intention to conduct a performance test at least sixty (60) calendar days before the test is scheduled to begin. Reports of performance test results shall be submitted no later than forty-five (45) days following the completion of the performance test, and shall be submitted as part of a notification of compliance status as described in 40 CFR 63.347(e), to the address listed in the Section C condition entitled "Performance Testing" of this permit.

(d) If actions taken by the Permittee during periods of malfunction are inconsistent with the procedures specified in the OMP required in Condition D.1.4, the Permittee shall record the actions taken for that event and shall report by phone such actions within two (2) working days after commencing actions inconsistent with the OMP. This report shall be followed by a letter within seven (7) working days after the end of the event, unless the Permittee makes alternative reporting arrangements, in advance, with IDEM, OAM.

(e) The Permittee shall prepare an annual summary report to document the ongoing compliance status of the facility using the Ongoing Compliance Status Report form provided with this permit. The report shall contain the information specified in 40 CFR 63.347(g)(3) that is applicable.

(f) This report shall be retained on site and made available to the Administrator upon request. The report shall be completed annually except as provided in 40 CFR 63.347(h)(2).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

(b) One (1) sand blaster, identified as SB-1, with a maximum capacity of two thousand and nine hundred and fifty(2950) pounds of plumbing fixtures per hour, using hepa filter as a control, and exhausting inside the building.

(c) One (1) buffing/polishing machine, identified as BP-1, with a maximum capacity of two thousand and nine hundred and fifty(2950) pounds of plumbing fixtures per hour, using two(2) cyclones as controls, and exhausting to two (2) stacks, identified as C-1 and C-2.

Emission Limitations and Standards

D.2.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the sand blaster and the buffing/polishing machine shall not exceed 5.32 pounds per hour respectively when operating at a process weight rate of 2950 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

Compliance Determination Requirement

D.2.2 Testing Requirements [326 IAC 2-7-6(1), (6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the Particulate Matter (PM) limit specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.2.3 Particulate Matter (PM)

(a) The cyclones for PM control shall be in operation and control emissions from buffing/polishing machine at all times the buffing/polishing machine is in operation..

(b) The hepa filter for PM control shall be in operation and control emissions from sand blaster at all times the sand blaster is in operation.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.4 Record Keeping and Reporting Requirements

There are no record keeping or reporting requirements for this facility.

SECTION D.3 Emissions units OPERATION CONDITIONS

(c) One (1) natural gas fired boiler, identified as B-27, with a maximum capacity of 2.6778 million British thermal units (MMBtu) per hour, and venting to the atmosphere.

(d) One (1) natural gas fired boiler, identified as B-28, with a maximum capacity of 0.360 million British thermal units (MMBtu) per hour, and venting to the atmosphere.

(e) Twenty-six (26) natural gas fired heaters, identified as SH 1-26, with a combined maximum capacity of 5.435 million British thermal units(MMBtu) per hour, and exhausting inside the building.

(f) Two (2) natural gas fired air make-up units, identified as AMU 29 and 30, with a combined maximum capacity of 2.916 million British thermal units(MMBtu) per hour, and venting to the atmosphere.

(g) Three (3) soldering tables, identified as ST 1-3, with a maximum combined capacity of 0.600 million British thermal units (MMBtu) per hour, and venting to the atmosphere.

(h) One (1) rack stripper, identified as RS-1, with a maximum capacity of two thousand and nine hundred and fifty(2950) pounds of plumbing fixtures per hour, and exhausting to one (1) stack, identified as P-1.

Emission Limitations and Standards

D.3.1 Particulate Matter (PM)

Pursuant to 326 IAC 6-2-3 (Particulate Matter Emission Limitations for Sources of Indirect Heating**,** the PM emissions from the 3.038 MMBtu per hour heat input boilers(B-27 and B-28) shall be limited to 0.43 pounds per MMBtu heat input.

This limitation is based on the following equation:

$Pt = (C \times a \times h)/(76.5 \times Q^{0.75} \times N^{0.25})$

Where Pt = Pounds of particulate matter emitted per million Btu heat input(lb/MMBtu)
C = 50 micrograms/cubic meter
a = Plume rise factor, 0.67 for Q less than 1,000 MMBtu/hr
h = stack height in feet
Q = Maximum operating capacity in MMBtu/hr
N = Number of Stacks

Compliance Determination Requirement [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.3.2 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM , compliance with the particulate matter (PM) limit specified in Condition D.3.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	***Briggs Industries, Inc.***
Address:	**315 S. Sycamore Road, Flora, Indiana 46929**
City:	**Flora**
Phone #:	**(219) 967-4141**
MSOP #:	**015-11680-00033**

I hereby certify that Briggs Industries, Inc. is **9** still in operation.
9 no longer in operation.

I hereby certify that Briggs Industries, Inc. is
9 in compliance with the requirements of MSOP 015-11680-00033.
9 not in compliance with the requirements of MSOP 015-11680-00033.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
FAX NUMBER - 317 233-5967

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY:_____PHONE NO. ( )_____
LOCATION: (CITY AND COUNTY)_____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____
INSP:_____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON:_____
_____
_

DATE/TIME MALFUNCTION STARTED: _____/_____/ 19____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 19____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER:_____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____

_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES:_____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE)_____
_____
_____

MALFUNCTION REPORTED BY:_____TITLE:_____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____

*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____

_____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

MINOR SOURCE OPERATING PERMIT
CHROMIUM ELECTROPLATING NESHAP
ONGOING COMPLIANCE STATUS REPORT

Source Name: Briggs Industries, Inc.
Source Address: 315 S. Sycamore Road, Flora, Indiana 46929
Mailing Address: 315 S. Sycamore Road, Flora, Indiana 46929
Minor Source Operating Permit No.: 1015-11680-00033

Tank ID #: _____
Type of process: Decorative
Monitoring Parameter: Surface tension of the electroplating bath
Parameter Value: 45 dynes per centimeter
Limits: Total chromium concentration may not exceed 0.01 mg/dscm if the chromium electroplating bath does not meet 45 dynes per centimeter

This form is to be used to report compliance for the Chromium Electroplating NESHAP only.
The frequency for completing this report may be altered by the IDEM, OAM, Compliance Branch.

submit this report no later than 30 days after the end of the reporting period.

This form consists of 2 pagesPage 1 of 2

BEGINNING AND ENDING DATES OF THE REPORTING PERIOD:
TOTAL OPERATING TIME OF THE TANK DURING THE REPORTING PERIOD:

MAJOR AND AREA SOURCES: CHECK ONE	
9	NO DEVIATIONS OF THE MONITORING PARAMETER ASSOCIATED WITH THIS TANK FROM THE COMPLIANT VALUE OR RANGE OF VALUES OCCURRED DURING THIS REPORTING PERIOD.
9	THE MONITORING PARAMETER DEVIATED FROM THE COMPLIANT VALUE OR RANGE OF VALUES DURING THIS REPORTING PERIOD (THUS INDICATING THE EMISSION LIMITATION MAY HAVE BEEN EXCEEDED, WHICH COULD RESULT IN MORE FREQUENT REPORTING).

AREA (I.E., NON-MAJOR) SOURCES OF HAP ONLY: IF DEVIATIONS OCCURRED, LIST THE AMOUNT OF TANK OPERATING TIME EACH MONTH THAT MONITORING RECORDS SHOW THE MONITORING PARAMETER DEVIATED FROM THE COMPLIANT VALUE OR RANGE OF VALUES.			
JAN	APR	JUL	OCT
FEB	MAY	AUG	NOV
MAR	JUN	SEP	DEC
HARD CHROME TANKS / MAXIMUM RECTIFIER CAPACITY LIMITED IN ACCORDANCE WITH 40 CFR 63.342(c)(2) ONLY: LIST THE ACTUAL AMPERE-HOURS CONSUMED (BASED ON AN AMP-HR METER) BY THE INDIVIDUAL TANK.			
JAN	APR	JUL	OCT
FEB	MAY	AUG	NOV
MAR	JUN	SEP	DEC

CHROMIUM ELECTROPLATING NESHAP
ONGOING COMPLIANCE STATUS REPORT

ATTACH A SEPARATE PAGE IF NEEDED **Page 2 of 2**

IF THE OPERATION AND MAINTENANCE PLAN REQUIRED BY 40 CFR 63.342 (f)(3) WAS NOT FOLLOWED, PROVIDE AN EXPLANATION OF THE REASONS FOR NOT FOLLOWING THE PLAN AND DESCRIBE THE ACTIONS TAKEN FOR THAT EVENT:
DESCRIBE ANY CHANGES IN TANKS, RECTIFIERS, CONTROL DEVICES, MONITORING, ETC. SINCE THE LAST STATUS REPORT:
ADDITIONAL COMMENTS:

ALL SOURCES: CHECK ONE	
9	I CERTIFY THAT THE WORK PRACTICE STANDARDS IN 40 CFR 63.342(f) WERE FOLLOWED IN ACCORDANCE WITH THE OPERATION AND MAINTENANCE PLAN ON FILE; AND, THAT THE INFORMATION CONTAINED IN THIS REPORT IS ACCURATE AND TRUE TO THE BEST OF MY KNOWLEDGE.
9	THE WORK PRACTICE STANDARDS IN 40 CFR 63.342(f) WERE NOT FOLLOWED IN ACCORDANCE WITH THE OPERATION AND MAINTENANCE PLAN ON FILE, AS EXPLAINED ABOVE AND/OR ON ATTACHED.

Submitted by: _____
Title/Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification from a responsible official to complete this report.

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for Minor Source Operating Permit

Source Name:	Briggs Industries, Inc.
Source Location:	315 S. Sycamore Road, Flora, Indiana 46929
County:	Carroll
Operation Permit No.:	015-11680-00033
SIC Code:	3432
Permit Reviewer:	Spahi

On January 27,2000, the Office of Air Management (OAM) had a notice published in the Carroll County Comet, stating that Briggs Industries, Inc had applied for a minor source operating permit to operate a decorative chromium electroplating plant for plumbing fixtures. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On February 21,2000, Briggs Industries, Inc. submitted comments on the proposed MSOP. The summary of the comments is as follows:

Comment #1: Section A.2(c) and D.2(c) and TSD page 1 of 7 - states that there is one (1) buffing/polishing machine, identified as BP-1. The application is for an entire buffing/polishing department composed of many machines in which the exhaust is vented to two(2) cyclones. All associated information in the application for buffing/polishing was for the entire department and not just one machine. The application does not use an identification of BP-1. Please change the wording at these three sections to reflect the entire buffing/polishing department.

Response #1: OAM, IDEM has already incorporated these changes in the permit. OAM, IDEM normally does not amend the TSD. This change will be kept on file.

Comment #2: Section A.2(f) and (g) and TSD page 1 of 7 - states that the heaters vent inside. The space heaters vent outside. The vents were not shown on the plant layout because the calculated emissions are insignificant. Please omit the wording that the heaters exhaust inside the building.

Response #2: OAM, IDEM has already incorporated these changes in the permit. OAM, IDEM normally does not amend the TSD. This change will be kept on file.

Comment #3: Section C.7 - Please confirm that Method 9 testing is not required to demonstrate compliance with opacity limits.

Response #3: Opacity testing by the source is not specifically required by this permit. However, an OAM inspector will use Method 9 test to determine if the source is in compliance with the 326 IAC 5-1-2 limits.

Comment #4: Section C.9 - Please correct the last sentence of this section.

Response #4: OAM, IDEM has already incorporated this change.

Comment #5: Section C.14 - states that an annual emission statement is required. Our calculated emission rates do not exceed the reporting threshold specified in 326 IAC 2-6, therefore, we believe an annual emission statement is not required and should be removed from the draft permit.

Response #5: OAM, IDEM has already incorporated this change.

Comment #6: Section C.17 - states that a quarterly compliance monitoring report shall be submitted and with a certification by the "authorized individual." We believe that quarterly compliance reports are not required. There are annual reports required for the Chromium NESHAP and they are to be prepared yearly and made available to IDEM upon request. Therefore, we do not understand what purpose submitting the quarterly reports is for. Also, section (a) and (d) do not agree on whether the certification by the authorized individual is required.

Response #6: Even though the NESHAP requires that a chrome source submit a annual report, 326 IAC 2-1.1-11 states that the commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. So under this rule (326 IAC 2-1.1-11), the commissioner is requiring that the source submit a quarterly ongoing compliance status report instead of an annual ongoing compliance report to assure compliance with all the applicable requirements. Section C.17(a) requires that an authorized individual sign the ongoing compliance report, so section C.17(d) shall be amended as follows:

C.16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. ~~The reports do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~

Comment #7: Section D.1.6(a) and (b) - The wording on the monitoring schedule is confusing. We would like to see this worded like the NESHAP as in TSD page 5.

Response #7: OAM, IDEM has updated the wording in section D.1.6(b) to clarify the monitoring schedule for the chromium tanks as follows (changes in bold):

D.1.6 Monitoring to Demonstrate Continuous Compliance [40 CFR 63.343 (c)(5) & (7)]

The Permittee shall monitor the surface tension of the electroplating baths in tank no. 1. Operation of the tank at a surface tension of greater than 45 dynes per centimeter shall constitute noncompliance with the standards. The surface tension of the tank when in operation shall be monitored according to the following schedule:

(b) ~~If all the surface tension measurements are less than 45 dynes per centimeter, then the source may measure the surface tension once a week of operation for a total of forty hours of operation, provided there are no more than eight hours of operation between each measurement. If all surface tension measurements, under this scenario, are less than 45 dynes per centimeter, then the source may measure the surface tension once each month, provided that there are no more than 40 hours of operation between each measurement. All surface tension measurements are to be taken during tank operation.~~ **The time between monitoring can be increased if there have been no exceedances. Once there are no exceedances in forty (40) hours of operating time, the surface tension measurement may be conducted once every eight (8)**

hours of operating time. Once there are no exceedances during forty (40) hours of operating time, surface tension measurement may be conducted once every forty (40) hours of operating time on an ongoing basis or on an alternative monitoring schedule approved by IDEM, OAM until an exceedance occurs.

Comment #8: Section D.1.8(f) -the section is mislabeled as "(a)".

Response #8: OAM, IDEM has already incorporated this change.

Comment #9: Section D.2.3 and TSD page 7 of 7 - The control equipment listed in (a) and (b) are switched. The cyclones are used for the buffing/polishing department and the hepa filter is used for the sand blasting.

Response #9: OAM, IDEM has already incorporated these changes in the permit. OAM, IDEM normally does not amend the TSD. This change will be kept on file.

Comment #10: Page 23 of 27 the MSOP annual notification form - The body of the permit does not state anything about this form. Is it required?

Response #10: Yes, an annual notification is required per 326 IAC 2-6.1-5(a)(5). This rule requires that an authorized individual provide an annual notice to the department that the source is in operation and in compliance with the permit. The commissioner may request that the source may provide an identification of all emission units that have been installed that are described under 326 IAC 2-1.1-3(d)91) through 326 IAC 2-1.1-3(d) with annual notification. A condition C.17 is being added to the body of the permit to state that the annual notification form is required as follows(changes in bold):

C.17 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) Annual notification shall be submitted to the Office of Air Management stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.

(c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Management
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

(d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

Comment #11: Page 26 and 27 NESHAP Compliance Status report - This form states "submit this report no later than 30 days after the end of the reporting period". This statement is incorrect since we are an area source. Page 19 of 27 and the TSD page 6 are correct in stating the report must be retained on site and made available.

Response #11: Even though the NESHAP requires that a chrome source submit a annual report, 326 IAC 2-1.1-11 states that the commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. So under this rule (326 IAC 2-1.1-11), the commissioner is requiring that the source submit a quarterly ongoing compliance status report instead of an annual ongoing compliance report to assure compliance with all the applicable requirements. There is going to be no change to the permit as a result of this comment..

Comment #12: Page 1 of 2 TSD App. B - Calculation of potential to emit (PTE) of the shot blast machine: Because of the enclosed nature of the shot blasting system, it is not possible for our shot blasting machine to be operated without the filtering system being used as well. We request that the control equipment be considered as an integral part of the shot blasting system and the "potential" emissions to be determined after the particulate control equipment.

Response #12: The primary purpose of the hepa filter is to control air pollution, the dust collected from the control equipment has no cost saving compared to the shot blast machine and the this control equipment would not have been installed if there were no air regulations in place. So this control equipment can not be considered an integral part of the shot blasting system and as a result of this comment there will be no change to the calculation of potential to emit (PTE) of the shot blast machine.

Upon further review, OAM has made the following changes (changes are bolded for emphasis):

B.1 Permit No Defense [IC 13]

This permit to operate does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.~~1~~ **2** Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.~~2~~ **3** Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Modification to Permit [326 IAC 2]

All requirements and conditions of this operating permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of operating permits pursuant to 326 IAC 2 (Permit Review Rules).

D.1.2 Chromium Electroplating NESHAP [326 IAC 20-8-1][40 CFR Part 63, Subpart N]

This facility is subject to 40 CFR Part 63, Subpart N, which is incorporated by reference as 326 IAC 20-8-1. A copy of this rule is attached.

(b) The following work practice standards for the ~~tanks~~ **tank** are also applicable:

(1) At all times, including periods of startup, shutdown and malfunction, the Permittee shall operate and maintain the ~~tanks~~ **tank**, wetting agent and foam blanket, and monitoring equipment in a manner consistent with good air pollution control practices, consistent with the Operation and Maintenance Plan (OMP) required by Condition D.1.4.

(4) Based on the results of the determination made under Condition D.1.2(b)(3) above, IDEM, OAM may require that the Permittee make changes to the OMP. Revisions may be required if IDEM, OAM finds that the plan:

(A) Does not address a malfunction that has occurred;

(B) Fails to provide for the operation of the tank, air pollution control techniques (i.e., wetting agent ~~and foam blanket~~), or process monitoring equipment during a malfunction in a manner consistent with good air pollution control practices; or

D.1.4 Operation and Maintenance Plan [40 CFR 63.342(f)(3)]

(a) An Operation and Maintenance Plan (OMP), in accordance with 40 CFR 63.342(f)(3), shall be prepared and implemented no later than the compliance date. The OMP shall specify the operation and maintenance criteria for tank no. 1, wetting agent ~~and foam blanket,~~ and monitoring equipment, and shall include the following elements:

(1) Manufacturers recommendations for maintenance of the monitoring equipment used to measure surface tension;

(2) Documentation of the operation and maintenance criteria for the tank, wetting agent ~~and foam blanket~~, and monitoring equipment;

(3) Procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur;

(4) A systematic procedure for identifying malfunctions of the tank, wetting agent ~~and foam blanket~~, and monitoring equipment; and for implementing corrective actions to address such malfunctions;

D.1.6 Monitoring to Demonstrate Continuous Compliance [40 CFR 63.343 (c)(5) & (7)]

The Permittee shall monitor the surface tension of the electroplating ~~baths~~ **bath** in tank no. 1. Operation of the tank at a surface tension of greater than 45 dynes per centimeter shall constitute noncompliance with the standards. The surface tension of the tank when in operation shall be monitored according to the following schedule:

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a *Minor Source Operating Permit*

Source Background and Description

Source Name: **Briggs Industries, Inc.**
Source Location: **315 S. Sycamore Road, Flora, Indiana 46929**
County: **Carroll**
SIC Code: **3432**
Operation Permit No.: **015-11680-00033**
Permit Reviewer: **Spahi**

The Office of Air Management (OAM) has reviewed an application from Briggs Industries, Inc. relating to the operation of a decorative chromium electroplating plant for plumbing fixtures.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) One (1) decorative chromium electroplating tank, identified as tank no. 1, with a maximum capacity of two thousand and nine hundred and fifty(2950) pounds of plumbing fixtures per hour, using a wetting agent, foam blanket, packed bed scrubber/composite mesh pad system as controls, and exhausting to one (1) stack, identified as P-2.

(b) One (1) sand blaster, identified as SB-1, with a maximum capacity of two thousand and nine hundred and fifty(2950) pounds of plumbing fixtures per hour, using hepa filter as a control, and exhausting inside the building.

(c) One (1) buffing/polishing machine, identified as BP-1, with a maximum capacity of two thousand and nine hundred and fifty(2950) pounds of plumbing fixtures per hour, using two(2) cyclones as controls, and exhausting to two (2) stacks, identified as C-1 and C-2.

(d) One (1) natural gas fired boiler, identified as B-27, with a maximum capacity of 2.6778 million British thermal units (MMBtu) per hour, and venting to the atmosphere.

(e) One (1) natural gas fired boiler, identified as B-28, with a maximum capacity of 0.360 million British thermal units (MMBtu) per hour, and venting to the atmosphere.

(f) Twenty-six (26) natural gas fired heaters, identified as SH 1-26, with a combined maximum capacity of 5.435 million British thermal units(MMBtu) per hour, and exhausting inside the building.

(g) Two (2) natural gas fired air make-up units, identified as AMU 29 and 30, with a combined

maximum capacity of 2.916 million British thermal units(MMBtu) per hour, and exhausting inside the building.

(h) Three (3) soldering tables, identified as ST 1-3, with a maximum combined capacity of 0.600 million British thermal units (MMBtu) per hour, and exhausting inside the building.

(i) One (1) rack stripper, identified as RS-1, with a maximum capacity of two thousand and nine hundred and fifty(2950) pounds of plumbing fixtures per hour, and exhausting to one (1) stack, identified as P-1.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) R 015-6980-00033, issued on December 17,1996.

All conditions from previous approvals were incorporated into this permit.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
P-1	Rack Stripper	34	0.67	470	ambient
P-2	Chromium Tank	34	2	4,725	"
C-1	Buffing/Polishing	34	2	7,000	"
C-2	Buffing/Polishing	34	2	7,000	"

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on December 20, 1999.

Emission Calculations

See Appendix A of this document for detailed emissions calculations from the natural gas fired

combustion units(1 page.)

See Appendix B of this document for detailed emissions calculations from the sand blast and buffing/polishing machines(2 pages.)

Chromium emissions(Single HAP) from the biggest source in Indiana is less than (10) tons per year and Briggs Industries, Inc. is a much smaller source in comparison. So no calculations were necessary for this source because the emissions from this source will be less than ten (10) tons per year.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	27.94
PM-10	21.64
SO_2	0.0
VOC	0.3
CO	4.4
NO_x	5.3

HAP's	Potential To Emit (tons/year)
Chromium Compounds	Less than 10
TOTAL	Less than 25

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(b) The existing source is subject to 326 IAC 20-8 and but not subject to 326 IAC 2-5.5-1(b)(2) (registration) because the source uses hexavalent chromium for decorative coating instead of trivalent chromium and the source emits less than major source levels(see statement (a) above). Therefore, the source is subject to the provisions of 326 IAC 2-6.1-3(a).

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
All Combustion Units(natural gas)	0.1	0.4	0.0	0.3	4.4	5.3	N/A
Buffing/Polishing	5.82	5.82	0.0	0.0	0.0	0.0	0.0
Sand Blasting	22.02	15.42	0.0	0.0	0.0	0.0	0.0
Chromium Tank	0.0	0.0	0.0	0.0	0.0	0.0	< 10 tons
Total Emissions	27.94	21.64	0.0	0.3	4.4	5.3	< 25 tons

County Attainment Status

The source is located in Carroll County.

Pollutant	Status
PM-10	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Carroll County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Carroll County has been classified as attainment or unclassifiable for PM-10 and CO. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	0.61
PM10	0.85
SO_2	0.0
VOC	0.3
CO	4.4
NO_x	5.3

(a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

(b) These emissions were based on the minor source operating permit (MSOP) application submitted by the company.

Federal Rule Applicability

(a) The boilers identified as B-27 and B-28 are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c, Subpart Dc because the individual maximum capacity of each of the boilers is less than ten (10) million British thermal units (MMBtu) per hour.

(b) The chromium electroplating operations are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 326 IAC 14, (40 CFR 63, Subpart N, and 326 IAC 20-1-1). Pursuant to 40 CFR 63, Subpart N, and 326 IAC 20-1-1, the chromium electroplating operations are subject to the following conditions:

The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 Subpart N.

(1) The surface tension of the chromium electroplating bath contained with the tank shall not exceed forty-five (45) dynes per centimeter at any time during the operation of the tank if a chemical fume suppressant containing a wetting agent is used to demonstrate compliance.

(2) Each time that surface tension monitoring exceeds forty-five (45) dynes per centimeter, the frequency of monitoring must revert back to every four (4) hours of tank operation. After forty (40) hours of monitoring tank operation every four (4) hours with no exceedances, surface tension measurement may be conducted once every eight (8) hours of tank operation. Once there have been no exceedances during forty (40) hours of tank operation, surface tension measurement may be conducted once every forty (40) hours of tank operation on an ongoing basis, until an exceedance occurs.

(3) An alternative emission limit of 0.01 milligram per day standard cubic meter (mg/dscm) will be applicable if the chromium electroplating bath does not meet the limit above.

(4) A summary report shall be prepared to document the ongoing compliance status of the chromium electroplating operation. This report shall be completed annually, retained on site, and made available to IDEM upon request. If there are significant exceedance of chromium air emission limits (as defined in 40 CFR Part 63.347(h)(2)), then semiannual reports shall be submitted to:

Indiana Department of Environmental Management
Air Compliance Branch, Office of Air Management
Chromium Electroplating
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206

(5) The chromium electroplating operations shall be subject to the record keeping and reporting requirement as indicated in the chromium electroplating NESHAP.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Carroll County and the potential to emit of any of the criteria pollutants is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-2-3 (Emission limitations for boilers)

Pursuant to 326 IAC 6-2-3(Particulate Emission Limitations for Sources of Indirect Heating), particulate matter (PM) emissions from the boilers(B-27 and B-28) shall be limited by the following equation:

$$Pt = (C \times a \times h)/(76.5 \times Q^{0.75} \times N^{0.25})$$

Where Pt = Pounds of particulate matter emitted per million Btu heat input(lb/MMBtu)
C = 50 micrograms/cubic meter
a = Plume rise factor, 0.67 for Q less than 1,000 MMBtu/hr
h = stack height in feet
Q = Maximum operating capacity in MMBtu/hr
N = Number of Stacks

$$Pt = (50 \times 0.67 \times 2.67)/(76.5 \times (3.038)^{0.75} \times (2)^{0.25}) = 0.43$$

The lb PM/MMBtu from both the boilers is less than 0.036, so these boilers meet this rule.

326 IAC 6-3-2 (Process Operations)

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

1. Buffing/Polishing Machine:

P = 2950 lbs = 2950lbs x 1 ton/2000lbs = 1.475 tons

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

$E = 4.10\ (1.475)^{0.67} = 5.32$ pounds per hour

The PTE of the Buffing/Polishing machine is 1.2625 pounds per hour, so this machine meets this rule.

The hepa filter shall be in operation at all times the buffing/polishing machine is in operation, in order to comply with this limit.

2. Sand Blast Machine:

P = 2950 lbs = 2950lbs x 1 ton/2000lbs = 1.475 tons

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

$E = 4.10\ (1.475)^{0.67} = 5.32$ pounds per hour

The PTE of the Sand Blast machine is 5.0278 pounds per hour, so this machine meets this rule.

The cyclones shall be in operation at all times the sand blaster is in operation, in order to comply with this limit.

Conclusion

The operation of this decorative chromium electroplating plant for plumbing fixtures shall be subject to the conditions of the attached proposed Minor Source Operating Permit 015-11680-00033.

Potential to Emit(PTE) of Buffing/Polishing Machines:

Particulate Matter

Amount of material collected from two(2) cyclones = 20.2 lbs/day
Hours of operation = 16 hours/day

Amount of PM collected per hour = 20.2 lbs/day x 16 hours/day
= 1.2625 lbs/hr

Amount of PM collected per year = 1.2625 lbs/hr x 8760 hrs/ yr x 1 ton/2000 lbs
= 5.52975 tons/yr

Collection efficiency = 95%

Amount of PM before control = 5.52975 tons/yr x 1/.95 = 5.82 tons/yr

Amount of PM after controls = 5.82 tons/yr x (1 - 0.95) = 0.29 tons/yr

Potential to Emit (PTE) of Shot Blast Machines:

Particulate Matter

Flow rate of Sand at 5/16"(FR1) = 354 lbs/hr
Density of Grit(P) = 130 lbs/ft^3
Density of Sand(P1) = 99 lbs/ft^3
Actual internal diameter of the nozzle(ID) = 0.325"
Nozzle diameter from Table 3-3(ID1) = 0.3125"

Flow Rate of Grit(FR) = FR1 x $((ID)^2 / (ID1)^2)$ x P/P1

= 354 lbs/hr x $((0.325")^2 / (0.3125")^2)$ x 130 lbs/ft^3/99 lbs/ft^3
= 502.78 lbs/hr

Emission factor lb PM/ lb Abrasive = 0.010
Emission factor lb PM10/lb PM = 0.70

Potential to Emit of PM before controls = Flow rate of Grit x Emission Factor lb PM/lb Abrasive
Potential to Emit of PM 10 before controls= PTE of PM before controls x Emission factor lb PM10/lb PM

Potential to Emit of PM before controls = 502.78 lbs/hr x 0.010
= 5.0278 lbs PM/hr = 22.02 tons PM/yr

Potential to Emit of PM 10 before controls = 5.0278 lbs PM/hr x 0.70 lbs PM10/lb PM
= 3.5196 lbs PM10/hr = 15.415 tons PM10/yr

Efficiency of Hepa filter = 99.0 %

Potential to Emit of PM after controls = 22.02 tons PM/yr x (1 - 0.99) = 0.2202 tons PM/yr
Potential to Emit of PM10 after controls = 15.415 tons PM10/yr x (1 - 0.99)
= 0.1545 tons PM10/yr

Note: Emission Factors from Air Quality Permits STAPPA ALAPCO Section 3, Edition May 30, 1991

There are no emissions from the rack stripper because rack stripping means washing the racks (on which the plumbing fixtures are placed) in a detergent solution.

There is a negligible amount of emissions from the welding/soldering because the maximum amount of welding sticks used by the source is less than 10 pounds per year.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
26 Space Heaters, 2 Boilers, 3 Soldering tables and 2 air make up units

Company Name: **Briggs Industries, Inc.**
Address City IN Zip: **315 S Sycamore Road, Flora, Indiana 46929**
CP: **015-11680**
Plt ID: **015-00033**
Reviewer: Spahi
Date: 01-05-00

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
12.0	105.1

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.1	0.4	0.0	5.3	0.3	4.4

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.